



INFORMATION PROCESSING SYSTEMS, INC. BROKERS AND CONSULTANTS IN ELECTRONIC DATA PROCESSING SYSTEMS  
200 WEST 57TH STREET NEW YORK N.Y. 10019 (212) CIRCLE 6-2267

## COMPUTER EQUIPMENT BULLETIN

### FOR SALE--USED EDP SYSTEMS & PERIPHERAL EQUIPMENT

The equipment below is offered for sale by IPS, subject to prior sale or withdrawal. Additional information, including prices, is available by writing or calling Mr. George H. Heilborn. There is, of course, no obligation.

IBM 7070 Card/Tape System. Complete 7070 system available for firm wishing to add to current 7070/74 capacity, to replace rented equipment, or to step up from 1400 series. A modern solid-state commercial data processing system at less than half the price of a new 7070. Includes: 7601 Arithmetic & Program Control with 4419 Automatic Floating Decimal Point option, 7602 Core Storage Control, 7301 Core Storage (5K words of 10 digits each), 7600 I/O Control, 7603 I/O Synchronizer, 7604 Tape Control, five (5) 729 II Magnetic Tape Units, 7150 Console, 7500 500-CPM Card Reader, 7550 250-CPM Card Punch, 7400 150-LPM Printer, 7802 Power Converter, 7830 Tape Switching Feature, 7155 Switch Control Console (last two items permit 7070's tape units to be logically switched to another computer, e. g., a 1401 for I/O operations). System now slightly over four years old. Available for delivery January, 1966.

IBM 705 II Tape System. 705 II Central Processor with 40K core memory, two 777 Tape Record Coordinators, 12 727 Tape Units, Console, and Card Reader. System now in operation; IBM maintenance contract available. 705 and 727's have been completely re-tubed within the last year. Delivery 90 days after contract. Excellent way to add temporary capacity for company having 705 system and/or programs.

Univac SS-80 Tape System. SS-80 system including 7113 Central Processor with 3 Index Registers, 5,000 word drum, 7150 Tape Synchronizer, eight (8) 7115 Uniservo IIA magnetic tape units, 7101 High Speed Printer. Does not include card reader/punch. Age: 4 years. Spare parts also included. Offered for immediate delivery at about one-tenth original cost. May be used for upgrading from 650 installation, since programming is similar.

Univac SS-90 Card System. SS-90 system with 7907 Central Processor, 5,000 word memory, 3 Index Registers, 7904 450-CPM Card Reader, 7902 150-CPM Card Punch, and 7901 600-LPM High Speed Printer. Price is small fraction of original cost. Age: 4 years. Availability date: March, 1965. Supporting RemRand tab installation also available. An inexpensive way to upgrade 90-column card or 1004 installation to full-scale computer operation.

Electronic Associates Dataplotter. EAI 3033D Digital Dataplotter, 30" X 30" plot surface, point or line plot, incremental advance, manual set origin point (may be decremented), capillary action pen & LeRoy pen, 12-symbol head printer, single sheet or continuous roll paper feed, vacuum paper hold down, illuminated plot board, "pen up" or "pen down" controllable by input cards. Also IBM 523 Card Input. System in good condition. Immediate delivery. Price is fraction of cost of Data-plotter alone, but includes IBM 523. Test plot available for inspection.

Benson-Lehner Electroplotter & OSCAR J. Electroplotter, for use with IBM Summary Punch as input, has 11" X 17" plot surface, five print rotors, zero & scale controls, axis interchange, cross plot for use with OSCAR J. Point plotter only--no line-drawing capabilities. OSCAR J (OSCillograph Analyzer & Reader), for digitizing 2-axis oscillograph traces, with two-digit channel counter, four-digit time slice counter with one-digit multiplier, decimal serial input keyboard, paper tape output, and visual readout. Both items priced low for quick sale.

*Available for \$6500 for LGP-30 + Flexowriter.*  
General Precision LGP-30. With Flexowriter. 200 cps High Speed Photoelectric Paper Tape Reader and 20 cps Punch available as options. All equipment just reconditioned. Immediate delivery at reasonable price.

Control Data G-15D. With alphanumeric I/O typewriter, paper tape reader, paper tape punch. Immediate delivery.

---

EQUIPMENT WANTED FOR LISTING

1401 E-5 or E-6 Central Processor & 12K/16K Memory wanted.

2 7330 tape units wanted for immediate delivery.

1401 E-4 System with 1402, 1403 II, 4 7330's (or C-4 with 729's).

---

PROSPECTIVE SYSTEM/360 USERS: You will probably be able to obtain more for your purchased IBM equipment on the open market than through the manufacturer's trade-in. To discuss this without obligation, please write or call us. Equipment should be listed for sale six months in advance of replacement date.

Executives and data processing managers wishing to receive IPS Equipment Bulletins regularly are requested to write us on their letter-heads.

E-29  
02235

*July, 1964*

A reprint from:

# **computers** **and automation**

## **THE USED COMPUTER MARKET — 1964: A BROKER'S VIEW**

*George H. Heilborn  
Information Processing Systems, Inc.  
New York, N. Y.*

# THE USED COMPUTER MARKET —

## 1964: A BROKER'S VIEW

George H. Heilborn  
Information Processing Systems, Inc.  
New York, N. Y.

Probably one of the most important aspects of the computer industry in the decade of the 1960's will be the development of a "secondary" market in EDP systems—that is, the trading and sale of used computer equipment. Just as the ship and aircraft markets (to say nothing of the automobile market) depend on the continuing value of used capital equipment to other organizations, so will the expansion of the used computer market open up other sales possibilities for new equipment and provide new opportunities for economical use of EDP equipment to both new and old users.

It is estimated that the computer market is now supporting sales (including sales value of equipment rented) of at least one billion dollars a year. Of this amount, about 15%-20% is bought outright, with the rest being leased. Even most of the leased equipment is eventually purchased by the lessee or another firm. Because of the recent growth of computer sales, and the rapid pace of technology in the field, there has been virtually no development of a market in used EDP equipment. Gradually, however, major firms are beginning to see the significance of the savings possible in this area, and it can be expected that there will soon be an active market in used computers.

Because of the fact that commercial computers are effectively only a decade old, very few of them have so far been written off as useless by their original owners. Moreover, from 1953 to 1958, the relatively small number of computers sold were exclusively vacuum-tube machines. While doing a good job for the original user, they had serious disadvantages against a transistorized machine as used equipment. Particularly if one considered moving and reinstalling the machine, major costs had to be incurred in dismantling, providing facilities at the new site, including power and air-conditioning, and reinstallation. Last, but not least, maintenance on the older vacuum-tube machines is relatively expensive, and in certain cases, the original manufacturer is

no longer willing or able to provide such service. These capital and maintenance costs often were (and are) more important in considering the installation of a used vacuum-tube system than the purchase price of the machine itself.

### Economic Life

Now, however, the field is maturing somewhat, both with respect to used computers and the technology of the machines themselves. The transistorized systems, which were introduced by all the large manufacturers in 1958-60, are not only much more economical in installation and maintenance, and (for the same speed and capability) cheaper, but will also have a much longer *economic* life than the first generation of machines. The operational word here, of course, is *economic*. Any computer, including the original large-scale vacuum-tube machines, can probably operate indefinitely, with proper maintenance and under continuous use conditions. However, it is not economical to operate even a fully-depreciated machine if this means paying a premium in power consumption, air-conditioning, maintenance, and possibly restriction of productive capacity, over the rental or purchase-and-maintenance cost of a new machine. For the same reason, the system's value to another user is severely limited by the same economic restrictions. This applies particularly to large-scale vacuum-tube machines, and to a less extent to the smaller and more popular ones.

It can be said with a high degree of confidence, however, that the transistorized machines now being sold will have a useful and economically productive life well into the late 1960's and beyond. Very popular models of current medium and small scale computers have sold as many as several thousand systems, and the newer systems coming onto the market to reach still other potential customers will doubtless mean a continuing rapid expansion of the EDP market for the next several years.

## Purchase vs. Rental

However, as the market for EDP equipment stabilizes, it becomes clear that it is more and more economical to purchase equipment rather than lease it, especially where a multiple-shift operation is anticipated. Companies which want to get the financial benefits of leasing more and more tend to do so through a leasing company, which buys the equipment from the manufacturer, thus permitting multiple-shift operation for a known and predetermined monthly rental, rather than pay the manufacturer's extra-shift rental. Ownership of the machine may in some cases go to the renting company at the end of the lease, or the lessee may continue to lease the system at a small monthly rental at the end of the original lease term.

Even used equipment can, of course, be rented through the agency of a bank or leasing company. For corporations with established credit, this is a sound and relatively economical way to obtain the benefits of both rental and purchase of used equipment.

The Federal Government has recognized the advantages of buying rather than leasing EDP equipment, and most Federal agencies are now undertaking a review of their existing and proposed leases and purchases to assure that the Government makes the most economical possible lease/buy decision.\* It is estimated that the percentage of purchased machines in the Federal Government will double, from 15% to about 30%, in the next fiscal year alone.

Many companies, however, have been deterred from purchasing equipment when they take a good look at the payout calculations. For one thing, it has generally been necessary to assume that the machine would be valueless at the end of the 5-6 year depreciation period usually used. The primary reason for this is that there has been no market mechanism for disposing of used equipment, and hence no measure of value. Secondly, the trade-in schedules of the manufacturers suggest that the equipment's real value decreases very rapidly. This has strongly encouraged users to rent, and relieved the manufacturers of much of the responsibility of selling used systems. (A used rental system, when returned to the manufacturer, can be re-rented at the same price, assuming the machine is still in production.)

At the same time, the manufacturers, particularly IBM, have set relatively high prices on the used equipment which is offered, as long as that type of system is still in production. Again, this discourages the major computer user from the purchase of equipment.

## The Equipment Broker

As a result, a new approach must be recognized in the used EDP systems market—that of the equipment broker. He is basically the market's mechanism for evaluating the marketability and price of used equipment. The function of a broker, of course, is to know the market value of computers, who is selling, how to sell the equipment, and who might be willing to buy a particular system. Being familiar with a variety of users, and not committed to any particular line of systems, he can frequently be the source of sound and unbiased advice on the economics and possibilities of buying and selling computer systems.

On the one hand, there is now a method for a computer owner to determine the residual value of his equipment,

and thus allow intelligent planning and lease/buy decisions. He also has available a market mechanism for disposing of used equipment. On the other hand, the buyer is provided with a means of obtaining additional computer capacity at a greatly reduced cost. This may occur through the supplementing of his existing installation by adding peripheral equipment, or an additional identical system, or by replacement of his existing system by a larger, and conceivably, newer, computer. A particularly important potential buyer of used EDP equipment is the large institution which utilizes a number of computers now, wishes to enlarge its capacity, and is willing to consider a used system. Often, such an organization will have the trained operators and finished programs which allow it to make use of the additional system immediately, without the "hand-holding" necessary in the case of a user new to EDP systems.

Another advantage which might be noted in the purchase of used equipment is that, very often, a large number of programs, both manufacturer- and user-developed, are available by that time, often simplifying the task of putting the machine to work profitably in a short period.

It should not be thought that the development of the used computer market in this fashion is to the complete disadvantage of the computer manufacturers. Insofar as it permits the current owner to purchase a brand-new machine, which he might not have done given only the manufacturer's standard trade-in on his existing equipment, it helps sell more modern equipment, even though existing equipment is as little as two years old. In addition, the existence of a used computer market is to the advantage of a user considering changing manufacturers, where he ordinarily could expect no trade-in on his current installation. It also broadens the number of users of EDP equipment, some of whom cannot afford new systems. In this way, potential customers for new equipment, a few years later, are created.

## Prices

Prices on the open market for used equipment are determined by a number of considerations. Among these are, obviously: the manufacturer's trade-in schedule; the price for which he is willing to sell used equipment; the costs of installation and maintenance for that particular system; and its age. Less obvious considerations include: whether the equipment is still in production or not; the exact equipment configuration (a system for a certain purpose, with an unusual equipment configuration and set of options, is obviously more difficult to sell, and of less value on the open market, than a more conventional and widely useable configuration); and the capabilities of newer equipment in the same speed and price range. It is not true, as some computer owners believe, that "the age of my system doesn't matter—it does just as much work as it ever did." First, the age matters because of the relationship to trade-in value. In addition, no matter how well the machine still works, if a new one of the same speed and capacity can be bought for half the price, the old one's value is diminished to at least the same extent. In fact, in the small-scale market, fairly versatile computers are now available for as little as \$20,000 to \$25,000 (new), and somewhat higher if punched card input-output equipment is desired.

An excellent illustration of these principles, together with typical calculations, may be found in the article "The Case For Buying A Used Computer," *Computers and Automation*, Nov., 1962 p. 41. It should be pointed out that the time periods used for payout and depreciation may be greater or less than those used in the above article, depending on the type of system used.

\* See "Hearings before the Subcommittee on Census and Government Statistics of the Committee on Post Office and Civil Service, House of Representatives," Oct. 2, 3, 5, 1962, June 11, 13, 24, 1963, July 9, 15, 1963. (Available from Govt. Printing Office.)

In that article, three disadvantages of purchasing used computers are given:

1. reduction of contact with the computer profession;
2. loss of technical prestige;
3. loss of ability to do a few "frontier" problems.

These particular items, of course, tend to be of more importance in the technical and scientific computation area, than in the field of business data processing. This is especially true if the used machine is an additional machine in a complex data processing installation, which more often than not tends to be the case.

There are, of course, other disadvantages from the point of view of the buyer of data processing equipment. If he is purchasing a used installation, he must basically take what is available—he does not have the complete freedom of choice that he would have ordering new equipment from the manufacturer. He can, naturally, mitigate this to some extent by trading in some of the equipment he has purchased to the manufacturer, and ordering additional new or used equipment from him. The necessity for

doing this, however, shows up in the price the buyer is willing to pay the current owner for the equipment. Also, while main frame processors will probably not change a great deal in the near future, the rate of development of peripheral equipment is still not stable. Another point is that the maintenance cost for peripheral equipment is more age-dependent than that for the all-electronic items of equipment.

### Savings

The point, of course, in buying used EDP equipment is *savings*. There are clearly financial benefits possible in the use of modern EDP equipment which is two or three years old. Considering the capital investment required for a medium- or small-scale data processing system, the saving of even a fraction of the price of new equipment may mean a difference in capital outlay of one to several hundred thousand dollars. Savings of this order of magnitude clearly call for serious management attention to the benefits to be obtained by the purchase of used EDP equipment.

(Reprinted with permission from "Computers and Automation", July, 1964, Volume XIII, No. 7, © 1964, and published by Berkeley Enterprises, Inc., 815 Washington St., Newtonville, Mass. 02160)

---

## The canny way to add capacity in computer and EDP systems is to call IPS, Inc. about used equipment

We help solve both sides of your capacity problem economically:

- in filling your growing requirements with a larger used system or additional equipment.
- in helping you sell your outgrown equipment at a fair market price by locating a buyer whose requirements it can serve efficiently.

IPS—Information Processing Systems, Inc.  
—specializes exclusively in reliable used computer and EDP equipment, and is

the only broker and consultant to offer this nation-wide service.

We make no charge for listing your requirements, and generally no charge for listing your offer. Our standard commission is charged to the seller.

Consult IPS without obligation—concerning both the availability of systems meeting your growing requirements, and the market for the equipment you wish to sell. Have your comptroller write or call George Heilborn, President.



**INFORMATION PROCESSING SYSTEMS, INC.**

SUITE 1203A, 200 WEST 57TH STREET, NEW YORK, N. Y. 10019 (212) CIRCLE 6-2267

BROKERS AND CONSULTANTS IN ELECTRONIC DATA PROCESSING SYSTEMS